

that the average pressure was about as much above the yearly normal as the rainfall was proportionately below. It was remarked in the November summary that the high pressure of the previous months was likely to be followed by a winter of moderate rainfall. The small precipitation of the past month tends to confirm this opinion.

Volcanic activity abated somewhat, that of Mauna Loa's summit crater, Mokuaweoweo, ceasing on the night of the 8th. The disappearance of activity in this crater was as sudden as its beginning; earlier in the evening the reflection was the same as had been common during the eruption, but at about 11 p. m. this suddenly ceased, to be seen no more. Activity of the crater Halemaumau, in Kilauea, was reported at the end of the month to be about the same as at the beginning, a lava lake about 200 feet in diameter having formed in the pit.

A small tidal wave did minor damage at Hookena, Hawaii, during the early morning of the 19th, and the landing at Keawakapu, Maui, was destroyed by high seas at the same time.

Temperature mean for the month, 72.2°; normal, 71.5°; average daily maximum, 78.4°; average daily minimum, 67.0°; mean daily range, 11.4°; greatest daily range, 17° (12th and 24th); least daily range, 5° (4th); highest temperature, 80° (several); lowest temperature, 62° (24th).

Barometer average, 29.998; normal, 29.970; highest, 30.13, 15th; lowest, 29.84, 9th; greatest 24-hour change, that is from any given hour of one day to the same hour on the next, .08; low pressure, 8th to 10th, inclusive; high pressure, 4th to 13th, 17th, and 25th to 31st.

Relative humidity average, 75.9 per cent; normal, 73.9 per cent; mean dew-point, 63.5°; normal, 63.0°; mean absolute moisture, 6.42 grains per cubic foot; normal, 6.32 grains.

Rainfall, 1.34 inches; normal, 3.92 inches; rain record days, 11; normal, 16; greatest rainfall in one day, 0.35 (from 9 a. m. 30th to 9 a. m. 31st); total at Luakaha, 8.81; normal, 10.24; at Kapiolani Park, 0.68; normal, 3.55.

As was the case in November, due principally to the light rainfall, the artesian well water level rose but slightly during the month, from 33.34 to 33.40 feet above mean sea level. This is the lowest December level on record during the five years these observations have been made. The average December rise heretofore has been .44 of a foot. December 31, 1902, it stood at 34.57. The average daily mean sea level for the month was 9.90 feet, the assumed annual mean being 10.00 feet above datum; for December, 1902, it was 9.87.

Trade wind days, 24 (5 nne.); normal, 16; average force of wind during daylight, Beaufort scale, 1.0; average cloudiness, tenths of sky, 2.9; normal, 4.4.

Approximate percentages of district rainfall as compared with normal: Hawaii, Hilo district, 55 per cent; Hamakua, 35; Kohala, 50; Waimea, 13; Kona, 60; Kau, 57; island of Maui, variable from 28 at Wailuku to 119 per cent at Haleakala Ranch; island of Oahu, 40 per cent; island of Kauai, variable from 28 per cent at Waiawa to 175 per cent at Kilauea.

The heaviest monthly rainfall reported was at Olaa Plantation Mill, 10.56 inches. The heaviest 24-hour rainfalls were

at Kilauea, Kauai, 4.50 inches on the 1st; Haleakala Ranch, Maui, 2.14 inches on the 8th.

Temperature table for December, 1903.

Stations.	Elevation.	Mean max.	Mean min.	Cor. av'ge.	High-est.	Low-est.
	Feet.	°	°	°	°	°
Hilo	40	78.9	64.2	71.3	83	68
Pepeekeo	100	78.8	66.8	72.1	82	65
Olaa Mill	210	80.6	59.8	69.5	83	58
Kohala	521	76.4	64.8	69.9	81	61
Naalehu	1,903					
Waimea	2,730	76.8	56.8	66.1	84	52
Volcano House	4,000	70.9	51.1	60.3	79	48
Waiakoa	2,700	75.5	55.4	65.3	84	52
Keomuku	10	80.6	72.3	75.7	85	68
United States Magnetic Station	50	82.5	64.3	72.7	84	59
W. R. Castle	50	78.0	67.3	71.8	80	61
Ewa Plantation	60	80.7	64.2	71.7	82	58

Kohala, dew-point, 63.8°; relative humidity, 77.6 per cent.

Ewa plantation, dew-point, 61.6°; relative humidity, 69.1 per cent; barometer mean, 29.26.

United States Magnetic Station, dew-point, 63.0; relative humidity, 72.0.

Dew 8 mornings at Honolulu, and lunar halo 30th and 31st.

Reports from other stations: Pepeekeo, Hawaii, snow on mountains 21st, lasting but 2 days: distant thunder and lightning 21st; heavy surf 4-5th, 16th-21st, and 30th-31st; dew 13 mornings; bright morning and afterglow general through the month. Kohala, Hawaii, trade winds 25 days, southwesterly on other days. Waimea, Hawaii, fresh and strong northeasterly winds, alternating with calms; northerly gale 15th and 16th. Hilo, slight earthquake on the 8th, at 7:15 a. m. Volcano House reports very dry weather.

MEXICAN CLIMATOLOGICAL DATA.

By Señor MANUEL E. PASTRANA, Director of the Central Meteorologic-Magnetic Observatory.

December, 1903.

Stations.	Altitude.	Mean barometer.*	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
	Feet.	Inches.	° F.	° F.	° F.	%	Ins.		
Chihuahua	4,684	25.27	71.6	28.4	46.8	28	0.20		
Guadalajara (Obs. del Est.)	5,186	24.94	75.2	44.6	60.8	61	0.00	nw.	
Guanajuato	6,640	23.67	80.6	38.1	60.3	50	0.00	sw.	
Leon (Guanajuato)	5,906	24.28	74.7	34.9	56.5	57	T.	nne.	sw.
Mazatlan	25	29.94	81.0	55.0	72.5	72	T.	nw.	
Merida	50	29.98	94.3	45.0	71.2	71	0.11	ne.	
Mexico (Obs. Cent.)	7,472	23.06	69.8	36.5	53.6	54	T.	ne.	
Mexico (E. N. Agric.)	7,442								
Monterey (Seminario)	1,626								
Morelia (Seminario)	6,401	23.93	73.4	37.4	55.6	58	0.00	sw.	
Pachuca	7,959								
Parral	24.57	74.5	79.0	49.1		0.04	w.		
Puebla (Col. Cath.)	7,108	23.38	74.8	35.6	52.9	68	T.	ne.	
Puebla (Col. d Est.)	7,118	23.35	76.1	35.2	52.7	63	0.01	e.	
Salina Cruz	492	29.88	87.8	66.2	77.0	61	0.00	ne.	
San Juan, Bantista	30.05	81.0	65.7	72.7	82	1.04	ne.		
Vera Cruz	30.04	81.7	57.6	81.3	59	0.16	nne.		
Zacatecas	8,015	22.49	79.5	21.9	54.0	49	0.00	w.	
Zapotlan	5,078								

*The monthly barometric means are reduced to the international standard of gravity.